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Higher Education

Features for JANUARY 1960

Facilities for Higher Education . . . . . By ERNEST V. HOLLIS

Expanded Field Operations of the Office of Education
By ARTHUR L. HARRIS

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education

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By ERNEST V. HOLLIS *

Facilities for Higher Education

THE DECADE we have just entered is rich with promise. Population is soaring. Jobs and business opportunities continue to multiply. But for the fulfillment of the promise of the future, the economy must have a rapidly increasing supply of professional and technical manpower. This segment of the labor force comes largely from our institutions of higher education. Without it the rich prospects of an expanding economy, indeed our whole way of life, would falter and stagnate. For this reason we must provide the physical and human resources the colleges and universities require for growth and improvement. Moreover, we must pay for and cultivate these intellectual seedbeds of progress before they can yield the economic and cultural harvests we need.

The magnitude of the physical facilities problem in higher education depends on whether we put existing college and university plants in first-class condition, in addition to expanding them to meet increasing enrollments and changing programs, or limit ourselves to expansion by continuing to "make-do" with temporary and obsolescent structures which, if commercially operated, would be condemned as health or fire hazards. For the most part, this article will comment on an austere $16 billion proposal for providing the bare minimum of facilities for higher education. There is ample justification however, for investing $33 billion in the improvement and expansion of college plants between now and 1970. Some consideration of what could be accomplished with this larger amount is necessary in order to see the $16 billion austerity proposal in perspective.

The $33 billion expenditure would permit the razing and replacing of temporary war reuse and similar structures which are deteriorating into educational slums. It would permit the construction of new facilities to meet the current backlog of need and the new needs of each year of the decade ahead. This sum would include the cost of land, site development (including roads, sidewalks, and parking lots), utilities, and major equipment urgently needed. Only the well informed realize the extent to which heating plants are antiquated and overtaxed, that proper sites have not been developed, and that many libraries and laboratories are as bare as Mother Hubbard's cupboard of books and equipment necessary to teaching in the atomic age.

If $33 billion for higher education facilities in a decade appears to be a stupendous sum, consider that business and industry have spent more than that for plant development in a single year. It seems reasonable to suppose that an economy which produces close to $500 billion a year, and in 1959 spent $34.3 billion on its own plant development, can afford to invest an average of $3.3 billion a year for this purpose at colleges and universities. Nevertheless, in 1959 all institutions of higher education in the United States together spent only $750 million for plant development. In my judgment, the economy can afford to invest at least four times as much in the seedbed that will determine its future.

*Director of the College and University Administration Branch, Division of Higher Education, a position he has held under different titles since 1944. Dr. Hollis was graduated with B.S. and M.S. degrees in biology from Mississippi State University in 1918, was awarded the M.A. (1922) and Ph. D. (1938) degrees in higher education by Columbia University; he has received the LL.D., Litt. D., and L.H.D. as honorary degrees. Before coming to the Office, Dr. Hollis served in college positions from instructor through president and was a staff coordinator at the American Council on Education.

An Austerity Program

The remainder of this article reports an Office of Education survey which proposes a $16 billion austerity program. Except for built-in items, it does not include equipment needs, the costs of site acquisitions, or site development. It assumes the continued use of temporary and obsolete structures that have not been condemned as health or fire hazards.

The austerity program for college plant development is based on a number of assumptions. Chief among them are these:

▶ We will not have radical changes in programs and methods of instruction;

▶ We have a net unused amount of space which will accommodate 200,000 more students than are now enrolled;

▶ We can increase the use of instructional space by at least 25 percent through improving scheduling, reducing the number of small classes, and making a better per-student-station use of facilities;

▶ Colleges will not have to provide residential facilities for more than 35 or 40 percent of full-time enrollment, and not more than 10 percent of the residential students will be married and living with their families;

▶ Needed expansion of higher education facilities in the several States can be predicted from the pattern of student migration shown by decennial surveys for the last two or three decades.

The feasibility of the $16 billion "bare bones" construction program for colleges in the decade we are now entering is dependent on two additional factors that need to be recognized.

(1) The $16 billion is in 1959 dollars, and even a modest reduction in the purchasing power of the dollar within the decade would further reduce the facilities that can be provided with this amount.

(2) Neither educators nor architects have any generally accepted standards for the amount of space provided per student. For this survey, the Office of Education is using average practice as a norm from which to derive minimum required space per student. For instructional purposes, for example, it is assumed that each additional student will require 125 square feet, and for residential space, 235 square feet. At a current construction cost of $20 per square foot, new instructional space would now cost $2,500 per student. Assuming that 35–40 percent of full-time students will require residential space, and that 90 percent of them will be living in dormitories as single students, the cost for residential facilities would approximate $4,700 per additional student served. It is entirely possible, however, that trends in educational methods or practice will cause substantial deviation from these "norms" derived from current averages.

The intricate calculations and estimates used in applying the foregoing assumptions to college enrollment projections for the next decade to show how we arrive at the $16 billion figure will be covered in the final report. Suffice it to say here that both total and freshman (first-time students) enrollments in degree credit courses have risen gradually for the eighth consecutive year. Total enrollment rose from 2.1 million in the fall of 1951 to 3.4 million in the fall of 1959; freshman enrollment for the same period increased from 472,025 to 826,969. Conservative projections indicate that by the fall of 1965, college enrollment will reach 5.2 million students, and freshman enrollment will reach 1 million. By

THIS ARTICLE presents some highlights from a comprehensive survey of the physical plant needs and plans of the Nation's 2,000 colleges and universities. The Office of Education and the higher education institutions have had the study underway for more than 2 years. The final report is being issued in five major sections:

Part 1. Cost and Financing of College and University Buildings, 1951–55.

Part 2. Planning for College and University Physical Plant Expansion, 1956–70.

Part 3. Inventory of College and University Physical Facilities.

Part 4. Building Needs of Colleges and Universities.

Part 5. New Colleges and Universities Planned.

Part 1 has been distributed, Part 2 is at the Government Printing Office, and the other parts are in various stages of preparation. An interim report on Part 3 has been distributed.

The most expensive section and perhaps the one of most lasting value is Part 3, a facilities inventory that will show the number, kind, and condition of college plants and the use being made of them. In it we will have, for the first time in the history of higher education, data for appraising the adequacy of physical plants for present demands and for establishing standards of practice and a baseline for projecting building needs for the next decade or longer. The inventory will be brought up to date periodically, which increases its usefulness for normative and planning purposes.

the fall of 1970 total enrollment is expected to exceed 6 million students. And it should be remembered that these millions are not abstractions: they are human beings who even now are living in the homes and schools across the Nation.

If the more than 6 million youths expected to enroll in college in 1970 are to have as good facilities as the 3.4 million youths now in college have (many of theirs are substandard), we must invest at least $16 billion in physical plant development before 1970. In round numbers, $10.5 billion of the total should be devoted to the expansion of facilities, $6.5 billion to instructional purposes, and $4 billion to dormitories and related residential use. The remaining $5.5 billion should be used over the decade to replace and rehabilitate existing instructional and residential facilities to keep them safe for human use.

Narrowing the Gap Between Needs and Effort

If we accept $16 billion as the minimum needed for development of college plant during the 1960's, and assume that $1.6 billion of the total should be invested each year, the question we must answer is, Where is the money coming from? Let us look backward for a moment: Where did the plant development funds come from in, say, 1958–59, when $750 million was invested, 61.7 percent in public colleges and the rest in private colleges? Six major sources contributed to that amount, as the table on this page shows.

An examination of the six major sources of support for capital purposes shows a major reliance of public institutions on governmental appropriations, and of private institutions on philanthropic sources. Perhaps the most noteworthy fact reflected by the table is that 11 percent of the total of budgeted 1958–59 plant-development funds of all institutions is derived from bonds issued or funds borrowed by private colleges and universities, while 21.9 percent is derived from bonds and other forms of borrowing by public institutions.

In 1958–59 private schools enrolled 43 percent of the students but received only 40.6 percent of total funds for current support and even less, 38.3 percent, of the total funds for plant development. The private colleges and universities are falling behind public colleges more rapidly in plant development than in current support or enrollment.

Sources of the $750 million for plant development in 1958–59

Sources of funds	Percent for public colleges	Percent for private colleges
Gifts and grants, endowment earnings, and other sources of private support	4.5	23.3
Government appropriations — Federal, State, and local	33.1	1.7
Taxes	1.0	
Bonds	19.4	4.6
Other borrowing	2.5	6.4
Other	1.2	2.3
Total from all sources	61.7	38.3

No man can predict with certainty that the six major sources of capital income can be expanded to provide for the greatly increased financial needs of higher education. The total need is more than twice the $750 million invested in plant development in 1959. It is over four times the annual average spent for the period 1951–56. Moreover, the backlog of unmet need is increasing more rapidly than capital plant funds, even though in actual dollars such funds doubled between 1953 and 1960.

Certainly it is not safe to assume that in the next decade these six sources will be providing the same percentages of income as they provided in 1958–59. The future holds too many imponderables for us to know now whether individual and corporate philanthropists will contribute more than they do at present, and whether Federal, State, and local governments will contribute a larger proportion of their total income for higher education purposes.

Possible Lines for Federal Action

Since 1952, under the Housing Act of 1950, the Federal Government has shown its concern for the plight of public and private colleges by authorizing low-interest, long-term loans for the construction of college residential and related facilities. To date, loan approvals total more than $1 billion, and private lending agencies have been stimulated to lend hundreds of thousands of dollars on more favorable terms than those which prevailed before the enactment of this legislation. With the cooperation of the Office of Education, this program is adminis-

Continued on page 19

By ARTHUR L. HARRIS *

Expanded Field Service Operations of the Office of Education

THE IDEA of the Office of Education as a field service agency is not new. In a broad sense, all services provided by and all programs conducted in the Office of Education since its establishment have been "field" services and programs. The primary function of the Office is and always has been to serve educational agencies and institutions throughout our Nation in those areas of need in which the Office has competence to serve and has authority to do so.

Until World War II the Office served State educational agencies, independent schools, colleges, and universities only through its staff of specialists in Washington, D.C., who could meet requests for direct services in the field only by traveling between that city and other points throughout the country. When, during World War II, the Lanham Act was passed, the Office was called on to provide consultive services to the Federal Works Agency in the program for constructing school facilities for new communities of war workers. These services required that specialists be continuously available in an assigned geographic area. Thus, for the first time, the Office provided services through a staff supervised from Washington but located in field offices about the country.

After the war ended, the Office was called on to provide services to another Federal agency, the War Assets Administration, for the disposing of war surpluses—all types of equipment, supplies, and materials. This new demand for services was such that, until the fall of 1950, the Office of Education again had to assign specialists to field locations throughout the States.

The surplus property program was followed immediately by a program providing Federal funds to assist in constructing school facilities and meeting current school expenditures in areas affected by activities of the Federal Government (Public Law 815 and Public Law 874, 81st Cong.). The school assistance program now serves, through 54 State and territorial educational agencies, almost 4,000 school districts (including districts educating Indian children in public schools), from the State of Alaska and the territory of Guam in the west to Maine and the Virgin Islands in the east. From the very beginning, field representatives strategically placed throughout the country have made these services quickly available to local districts.

The placing of Office of Education staff members in field offices has been consistently based on the

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Dr. Harris was graduated from Park College, Parkville, Mo., in 1925. He received the M.A. degree from the University of Honolulu in 1935 and the Ph. D. from Yale University in 1942.

demand for field services, the nature of the program, the clientele, and the degree of coordination needed between specific functions and services provided in and from the Washington office and those to be provided in and from the field offices. The volume and the nature of the workload under the National Defense Education Act programs have revealed an urgent need for field services of at least two kinds, one for the more than 1,300 colleges and universities participating in the programs, and the other for the State and territorial departments of education.

For colleges and universities participating in NDEA programs, the informational, liaison, and consultive services required from the Office must be provided directly in the field, since for most of these institutions there are no agencies at State or regional levels through which they can receive these services. They can be served effectively only if qualified persons are available at strategic locations. Therefore the Office has arranged to assign a specialist in higher education to each of the nine regional offices of the Department of Health, Education, and Welfare, under the direction of the Division of Higher Education in the Washington office.

These specialists will establish a consultive relationship and continuing liaison with officials of colleges, universities, and such other agencies or institutions as may be concerned, for the purpose of carrying out the programs under the NDEA (the programs involved are those providing for loans to students, graduate fellowships for increasing the supply of well-trained college teachers, centers for research and training in rarely taught languages, institutes to improve the teaching of modern foreign languages in elementary and secondary schools, and institutes to train counselors and guidance workers). They will also make a continuing appraisal of the needs of institutions of higher education for assistance, consultation, and other services within the capacity of the Office of Education to provide.

For the State educational agencies participating in NDEA programs, the Office has attempted to provide adequate field service out of Washington. It has become apparent, however, that some of the services are of such scope and kind that it is both uneconomical and inefficient to furnish them in this way. Arrangements are being made, therefore, to transfer five or six positions from the State and Local School Systems Division of the Washington office to field locations, from which services can be provided to groups of States more expeditiously and economically.

NDEA FIELD APPOINTMENTS TO DATE

	Regional Office	*NDEA Field Representative*
Region I	Boston	Eino A. Johnson
II	New York	Edward S. Noyes
III	Charlottesville	M. Howard Bryant
IV	Atlanta	
V	Chicago	Clarence E. Deakins
VI	Kansas City, Mo.	George W. Rosenlof
VII	Dallas	Leonard G. Nystrom
VIII	Denver	
IX	San Francisco	Robert E. McConnell

The services now being required of the Office of Education differ from those provided in past years not so much in kind as in the sheer volume and urgency of the need for them.

The Commissioner of Education realizes that he cannot continue to discharge adequately at long distance his direct responsibility for coordinating the expanding Office activities in the field, even though these activities will and must remain within the scope of what is proper for the Federal agency of education in our system. He has chosen, therefore, to extend himself through carefully selected regional representatives. Their duties and responsibilities require them to be the best qualified educational generalists that can be recruited.

The regional representatives will assist the Commissioner to coordinate in the field those Office of Education activities for which the Commissioner is responsible, to see not only that services are provided with economy and efficiency but that the basic policy of the Office is followed at all times: To provide leadership without domination, to provide assistance without interference, to seek at all times to strengthen and increase the effectiveness of our traditional pattern for the determination and control of education.

Through these representatives the Government will provide nine centers at which interested agencies and individuals can readily secure the information that the Office of Education has gathered, organized, and compiled—information about (1) education in the United States, (2) research projects and findings on educational problems, (3) education in foreign

countries, and (4) Federal programs of interest to educators.

In addition, these representatives, having exceptionally broad backgrounds of successful experience in public and higher education, will consult with other Federal agencies working in the field on such matters as child health, juvenile delinquency, migrant labor, rural development, mental retardation, and civil defense, to interpret for them the educational involvements and implications of their activities. On the request of chief State school officers or heads of institutions of higher learning, they will also be available for consultation on educational problems, under the guidance of the Commissioner, to State departments of education and to colleges and universities. Their activities, however, will in no way affect the direct relationships between the Commissioner and the chief State school officers or the heads of institutions of higher learning, for they will not constitute an intervening organizational echelon.

All field activities of the Office of Education will continue to be based on the staffwork of the central office. Programwise, all field personnel are under the supervision of and responsible directly to the Office of Education in Washington. It is in no way contemplated that any field or regional unit will or ever can be adequately staffed to perform as a "little Office of Education."

The role of the Office of Education in promoting the cause of education in the United States, and its status as an agency of our national Government, make it the logical agency to serve the national interest in education—an interest common to all of us. Great advances in science and technology, in a world setting of conflicting ideologies and awakening primitive cultures, urge us to intensify our efforts to meet our educational needs. We can meet these needs only by pooling our resources, coordinating our efforts, and exchanging with each other on a nationwide basis the knowledge gained from experience and research—always in a manner that will preserve the essential freedoms of our system of education.

The Office of Education seeks to play its part more effectively by bringing its centers of communication and assistance closer to educational institutions and educational leaders, in order that the best elements of American education may be more rapidly identified, more rapidly disseminated, and made increasingly functional rather than of mere academic interest.

The Office of Education is an integral part of our nationwide cooperative educational enterprise. Its professional staff members are drawn from and in many cases return to the ranks of their profession, on the staffs of State or local educational agencies, schools, colleges, or universities.

The Office of Education has representatives in each of the regional districts of the Department of Health, Education, and Welfare. The map shows the States served by each representative.

In the sense that the faculty constitutes the university, so does the staff of the Office of Education constitute the Office. In increasing the services it extends through its field staff, the Office seeks no self-aggrandizement, no empire building, no usurpation of authority—it seeks only to contribute to the greater effectiveness of the efforts of all of us to meet our needs in education and those needs which can be met only through education.

Office of Education Studies and Surveys

Opening College Enrollment, Fall 1959

By EDITH M. HUDDLESTON *and* HAZEL C. POOLE *

THE ANTICIPATED rise in college enrollments is in fact taking place. Reports collected by the Office of Education in its 14th annual survey of opening (fall) enrollment in higher education show that during the first few months of the 1959 fall term, 3,402,297 students were enrolled in degree-credit programs—4.4 percent more than in the fall of 1958; and that the number enrolling *for the first time* increased even more, by 5.9 percent (table 1). This makes the eighth consecutive year in which the Office survey has reported increases.

Table 1.—Total and first-time opening enrollment of degree-credit students in all institutions: Fall 1959 and fall 1958

[Aggregate United States]

Total and first-time enrollment	Number of institutions, 1959	Number of students		Percent change
		Fall 1959	Fall 1958	
Total enrollment	1,952	3,402,297	3,258,556	+4.4
1st-time enrollment	1,809	826,969	781,075	+5.9
Percent of total		24.3	24.0	

Distribution of these students, both the total number and the part time, between public and private institutions, between 4-year and junior colleges, and between the sexes, is shown in table 2.

Description of the Survey

The survey covers the "aggregate" United States, that is, the 50 States, the District of Columbia, and the outlying parts. All data in this article, unless otherwise noted, are for the aggregate United States.

*Education Research and Program Specialist, and Assistant Supervisor of Statistical Services, respectively, in the Division of Statistics and Research Services, Office of Education.

Table 2.—Total and first-time opening enrollment of degree-credit students, by institutional control, level of offering, and sex: Fall 1959

[Aggregate United States]

Level of offering and sex	Type of institutional control	
	Public	Private
Total enrollment		
All institutions	2,002,868	1,399,429
Men	1,265,616	908,181
Women	737,252	491,248
4-year institutions	1,645,946	1,344,856
Men	1,032,411	880,713
Women	613,535	464,143
Junior colleges	356,922	54,573
Men	233,205	27,468
Women	123,717	27,105
First-time enrollment		
All institutions	505,348	321,621
Men	303,815	186,807
Women	201,533	134,814
4-year institutions	351,551	292,733
Men	205,751	173,078
Women	145,800	119,655
Junior colleges	153,797	28,888
Men	98,064	13,729
Women	55,733	15,159

The term "degree-credit students" used here designates students whose current program consists wholly or principally of work which would ordinarily be credited toward a bachelor's or higher degree—either in the institution in which the students are now enrolled, or in institutions to which they may transfer (as from junior colleges to 4-year institutions). The present survey *includes* undergraduate,

graduate, special, and unclassified degree-credit students, both in residence and at extension centers, full time and part time, day and evening; but does not include auditors or students enrolled for "short courses" or individual lessons, students taking courses at home by mail, radio, or TV, and non-degree-credit students in adult-education or terminal-occupational courses.

Table 3.—Percentage analysis of total and of first-time enrollment of degree-credit students: Fall 1959 and fall 1958

[Aggregate United States]

Type of institution	Percent of total enrollment [1]		Percent of first-time enrollment [1]	
	1959	1958	1959	1958
All institutions	100.0	100.0	100.0	100.0
4-year institutions	87.9	88.1	77.9	77.5
Junior colleges	12.1	11.9	22.1	22.5
4-year institutions:				
Universities	43.1	44.1	32.8	32.8
Liberal arts colleges	28.4	27.9	29.4	28.9
Independently organized professional schools:				
Teachers colleges	10.3	9.9	10.8	11.0
Technological schools	3.1	3.0	2.7	2.5
Theological, religious	1.2	1.1	.8	.7
Schools of art [2]	.5	.5	.3	.3
Other professional [2]	1.4	1.7	1.2	1.3

NOTE.—Detail does not necessarily add to totals because of rounding.

[1] Percentages computed from unrounded figures.

[2] "Schools of art," formerly included in the "other professional" category, are now classified separately (beginning in 1959). For purposes of comparison with 1959 data, the 1958 data have been revised to show this breakdown.

Schools of art are institutions specializing in painting, sculpture, design, drama, music, dance, etc. The remaining "other professional" schools include schools of medicine, law, business, etc.

The data for the fall of 1959 represent enrollment in 1,952 institutions of higher education. Excluded from the survey are technical institutes and semi-professional schools, which do not offer programs consisting wholly or principally of work creditable toward a bachelor's degree. The basic source of the institutional listing was the *Education Directory, 1958–59: Part 3, Higher Education*, with such changes as were known to the Office of Education.

All but 5 of the 1,952 institutions addressed in the survey reported their enrollments. For the five small institutions that failed to respond, the Office made estimates.

Enrollment in Relation to Population

Since the preponderance of students enrolled for degree-credit work are between the ages of 18 and 21, that age group is used here as a basis for comparing enrollment with population. For the 48 contiguous States (and the District of Columbia) alone, there were 36.2 degree-credit students in 1959 per 100 persons aged 18–21; in the fall of 1958, there were 35.6 per 100; and 20 years ago, in the fall of 1939, there were only 14.3 per 100. It is likely that future increases in enrollment will be due not only to increases in the college-age population but also to increased interest in college attendance.

Enrollment by Type and Control of Institution

Table 3 shows how the total degree-credit enrollment and the first-time enrollment were divided among the various types of institutions in 1959 and in 1958: The percent of total enrollment in the junior colleges in 1959 (12.1) was the same as for 1957, the slight increase 1958 to 1959 offsetting a corresponding decrease 1957 to 1958 (data not shown).

Relative changes in total enrollment and in first-time enrollment are given in tables 4 and 5, which show the percentage of change for each type of institution since the fall of 1958. As compared with overall average increases of 4.4 and 5.9 percent in total and first-time enrollments, respectively, greater than average increases in each type of enrollment were observed in liberal arts colleges, technological schools, and in theological-religious schools. It is interesting that the largest percentage increases in both total and first-time enrollment took place in the theological-religious group.

Data on first-time enrollment are of value because these are the figures which—more than the totals—point to the future. Students were counted as "first time" in this survey if the fall of 1959 marked their first enrollment in any institution for degree-credit work. First-time students accounted for 31.9 percent of the increase in total degree-credit enrollment from 1958 to 1959, as compared with 27.0 percent of the increase from 1957 to 1958.

4.—Total opening enrollment of degree-credit students, by type of institution and by sex: Fall 1959 and fall 1958

[Aggregate United States]

Type of institution	Number of institutions, 1959	Enrollment (in thousands) [1]		Percent change [2]
		Fall 1959	Fall 1958	
All institutions	1,952	3,402	3,259	+4.4
Men		2,174	2,110	+3.0
Women		1,229	1,148	+7.0
4-year institutions	1,440	2,991	2,872	+4.1
Men		1,913	1,862	+2.7
Women		1,078	1,010	+6.7
Junior colleges	512	411	387	+6.5
Men		261	249	+4.9
Women		151	138	+9.3
4-year institutions:				
Universities	141	1,465	1,436	+2.0
Men		1,024	1,017	+0.7
Women		441	419	+5.2
Liberal arts colleges	756	966	909	+6.3
Men		537	507	+5.9
Women		429	401	+6.8
Independently organized professional schools:				
Teachers colleges	198	352	323	+9.0
Men		172	161	+7.1
Women		180	162	+10.9
Technological schools	51	104	97	+7.0
Men		98	92	+6.6
Women		7	6	+14.3
Theological, religious	173	42	37	+12.3
Men		33	30	+10.5
Women		9	7	+19.5
Schools of art [3]	46	15	15	+1.6
Men		9	8	+1.3
Women		7	7	+2.0
Other Professional [3]	75	47	55	−14.4
Men		40	46	−14.3
Women		7	9	−15.2

[1] Detail does not necessarily add to totals because of rounding.

[2] Percentages computed from unrounded figures.

[3] "Schools of art," formerly included in the "other professional" category, are now classified separately (beginning in 1959). For purposes of comparison with 1959 data, the 1958 data have been revised to show this breakdown.

Schools of art are institutions specializing in painting, sculpture, design, drama, music, dance, etc. The remaining "other professional" schools include schools of medicine, law, business, etc.

Table 5.—First-time opening enrollment of degree-credit students, by type of institution and by sex: Fall 1959 and fall 1958

[Aggregate United States]

Type of institution	Number of institutions, 1959	Enrollment (in thousands) [1]		Percent change [2]
		Fall 1959	Fall 1958	
All institutions	1,809	827	781	+5.9
Men		491	469	+4.7
Women		336	312	+7.6
4-year institutions	1,298	644	606	+6.4
Men		379	361	+5.1
Women		265	245	+8.3
Junior colleges	511	183	175	+4.1
Men		112	108	+3.5
Women		71	67	+5.2
4-year institutions:				
Universities	141	271	256	+5.7
Men		177	169	+4.7
Women		94	87	+7.7
Liberal arts colleges	745	243	226	+7.6
Men		127	119	+7.0
Women		116	107	+8.3
Independently organized professional schools:				
Teachers colleges	195	89	86	+3.7
Men		42	43	−0.7
Women		47	43	+8.1
Technological schools	48	22	19	+14.6
Men		20	18	+14.5
Women		2	2	+16.0
Theological, religious	91	6	5	+18.6
Men		4	3	+14.9
Women		3	2	+24.0
Schools of art [3]	44	3	3	+5.5
Men		1	1	+3.6
Women		1	1	+7.8
Other professional [3]	34	10	10	−4.1
Men		7	8	−9.6
Women		3	2	+13.7

[1] Detail does not necessarily add to totals because of rounding.

[2] Percentages computed from unrounded figures.

[3] "Schools of art," formerly included in the "other professional" category, are now classified separately (beginning in 1959). For purposes of comparison with 1959 data, the 1958 data have been revised to show this breakdown.

Schools of art are institutions specializing in painting, sculpture, design, drama, music, dance, etc. The remaining "other professional" schools include schools of medicine, law, business, etc.

Enrollment in Publicly Controlled and Privately Controlled Institutions

Approximately 6 of every 10 degree-credit students were enrolled in publicly controlled institutions in the fall of 1959. Enrollment in publicly controlled institutions increased by 4.7 percent, total enrollment increased 4.4 percent, and enrollment in privately controlled institutions increased by 3.9 percent. In 4-year institutions alone, however, there was no difference in proportionate increase: both the publicly and the privately controlled 4-year institutions showed increases of 4.1 percent. In *first-time* enrollment, however, privately controlled 4-year institutions showed a greater gain—7.1 percent as against 5.8 percent for publicly controlled.

Among junior colleges, the enrollment in the publicly controlled increased by 7.6 percent from 1958 to 1959, while that in the privately controlled decreased slightly (—0.5 percent).

Long-term trends in enrollment, by type of institutional control, are presented in table 6.

Enrollment of Men and Women

The fall of 1959 marked the third successive year in which total enrollment of women was rising more rapidly than that of men. Women's enrollment was 7.0 percent higher than in 1958; men's enrollment was 3.0 percent higher.

Data showing relative enrollment changes for men and for women are presented in tables 4 and 5. For both men and women, the greatest proportional gains in total and in first-time enrollment occurred in the theological-religious institutions.

Historical data on sex ratios are presented in table 7.

Other Publications

Total and first-time enrollments in the fall of 1959, by sex, for *individual institutions* have already been published in Circular No. 606, *Opening (Fall) Enrollment in Higher Education, 1959: Institutional Data*. Copies may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., for 30 cents each.

The detailed analytic report for the fall of 1959, *Opening (Fall) Enrollment in Higher Education, 1959: Analytic Report*, is being prepared and will be completed within the next few months. This circular will provide an extensive analysis of trends in open-

Table 6.—Total opening enrollment of degree-credit students, in all institutions, in 4-year institutions, and in junior colleges, by type of institutional control: Fall 1939, 1949, and 1954–59

[Aggregate United States]

Fall	Total (thousands)	Publicly controlled		Privately controlled	
		Number (thousands)	Percent of total [1]	Number (thousands)	Percent of total [1]
	ALL INSTITUTIONS				
1939 [2]	1,365	727	53.2	638	46.8
1949	2,457	1,219	49.6	1,238	50.4
1954 [3]	2,469	1,373	55.6	1,096	44.4
1955 [3]	2,679	1,499	55.9	1,180	44.1
1956	2,947	1,682	57.1	1,265	42.9
1957	3,068	1,780	58.0	1,288	42.0
1958	3,259	1,912	58.7	1,346	41.3
1959	3,402	2,003	58.9	1,399	41.1
	4-YEAR INSTITUTIONS				
1939 [2]	1,215	619	50.9	597	49.1
1949	2,228	1,048	47.0	1,180	53.0
1954 [3]	2,184	1,131	51.8	1,053	48.2
1955 [3]	2,370	1,233	52.0	1,137	48.0
1956	2,599	1,383	53.2	1,216	46.8
1957	2,698	1,463	54.2	1,235	45.8
1958	2,872	1,581	55.0	1,291	45.0
1959	2,991	1,646	55.0	1,345	45.0
	JUNIOR COLLEGES				
1939 [2]	149	108	72.1	42	27.9
1949	229	171	74.6	58	25.4
1954 [3]	285	242	84.9	43	15.1
1955 [3]	309	266	86.1	43	13.9
1956	348	299	85.7	50	14.3
1957	370	317	85.6	53	14.4
1958	387	332	85.8	55	14.2
1959	411	357	86.7	55	13.3

NOTE.—Detail does not necessarily add to totals because of rounding.

[1] Percentages computed from unrounded figures.

[2] Continental United States (contiguous States); estimated.

[3] Classification of institutions by type adjusted to agree with classification in 1956.

ing enrollment, by sex, curricular-organizational type of institution, and type of institutional control.

Table 7.—Total opening enrollment of degree-credit students by sex: Fall 1939 and 1946–59

[Aggregate United States]

Fall	Total (thousands)	Men		Women	
		Number (thousands)	Percent of total [1]	Number (thousands)	Percent of total [1]
1939 [2]	1,365	816	59.8	549	40.2
1946 [2]	2,078	1,418	68.2	661	31.8
1947 [2]	2,338	1,659	71.0	679	29.0
1948	2,408	1,712	71.1	696	28.9
1949	2,457	1,729	70.4	728	29.6
1950	2,297	1,569	68.3	727	31.7
1951	2,116	1,399	66.1	718	33.9
1952	2,148	1,387	64.6	761	35.4
1953	2,251	1,432	63.6	818	36.4
1954 [3]	2,469	1,575	63.8	893	36.2
1955 [3]	2,679	1,747	65.2	931	34.8
1956	2,947	1,928	65.4	1,019	34.6
1957	3,068	2,003	65.3	1,065	34.7
1958	3,259	2,110	64.8	1,148	35.2
1959	3,402	2,174	63.9	1,229	36.1

NOTE.—Detail does not necessarily add to totals because of rounding.

[1] Percentages computed from unrounded figures.

[2] Enrollments for 1939, 1946, and 1947 are for continental United States (contiguous States); all other enrollments are for aggregate United States. Data for 1939 and 1946 are estimates.

[3] Classification of institutions by type adjusted to agree with classification in 1956.

New Tidewater Virginia Plan Recommended

IN ORDER to meet the expanding needs for higher education in the Tidewater area of Virginia (Norfolk, Portsmouth, Newport News, Hampton, and the immediately surrounding counties) and at the same time capitalize as fully as possible on the resources of existing collegiate institutions in the region, a new organizational plan is recommended in the report of an Office of Education survey entitled *Higher Education in the Tidewater Area of Virginia.*

The new plan would bring together four public higher institutional units—tentatively termed "the Associated Colleges of Tidewater Virginia"—including a proposed new 2-year college in the Newport News area. These units would operate under a single board of control and under a single administrative office not attached to any component unit. The report makes other recommendations, spelling out in considerable detail the programs needed to meet the demands that will result from the increase in college enrollment from the present figure of approximately 7,500 to one of almost 20,000 projected for 1970.

The findings, conclusions, and recommendations of this survey are reported in two publications: one represents the full final report, including basic substantiating data, and the other presents only main conclusions and recommendations with selected items of documentation. The two publications were released for general distribution at a special meeting, held jointly by the two agencies which sponsored the survey, on December 4 in Norfolk, Va. The Division of Higher Education conducted the survey as a service to the State Council of Higher Education of Virginia in its planning for higher education in the State. Eleven staff members of the Division served on the survey team, with S. V. Martorana acting as director of the survey and Ernest V. Hollis as chief consultant. Requests for copies of the report should be directed to the Virginia State Council of Higher Education, 301 Finance Building, Richmond 19, Va. See "New Publications," page 20, for bibliographical detail.

Trends in Organization and Administration

A STUDY initiated in December 1959, by the State and Regional Organization Section, College and University Branch, Division of Higher Education, will seek to identify the character and direction of changes being made in the organizational structure of institutions of higher learning and in the roles assigned to key administrative officials. Particular effort will be made to identify the extent to which the changes can be attributed to present or impending enrollment increases.

College and university administrators were called on to assist in this project by providing to the Office of Education copies of administrative manuals, organizational charts, and related documents.

The study is being conducted by Archie R. Ayers, specialist for College and University Organization and Administration. It is projected to run for approximately 3 years, with progress reports to be released intermittently during this time.

National Defense Education Act Notes

"Neglected Language" Fellowships To Be Awarded

BEFORE April 30, 1960, the Office of Education will award approximately 400 federally financed modern foreign language fellowships for graduate study during the summer of 1960 and the 1960–61 academic year.

The purpose of the language fellowships is to increase the number of teachers of the 85 languages in which, until now, instruction has been almost nonexistent in U.S. universities, although each is spoken by millions of people. The fellowships are authorized under title VI of the National Defense Education Act of 1958. From the approximately 400 to be granted, provision must be made for as many of the 171 fellows of the 1959–60 academic year as wish to apply for renewal.

U.S. Commissioner of Education Lawrence G. Derthick has already indicated that the need for the program is greatest in Arabic, Chinese, Hindi, Japanese, Portuguese, Russian, and Urdu. He has designated these as "first priority" languages.

Second priority languages are: Bengali, Burmese, Finnish, Hebrew (modern), Hungarian, Indonesian-Malay, Khalka, Korean, Marathi, Persian, Polish, Serbo-Croatian, Singhalese, Swahili, Tamil, Telegu, Thai, and Turkish.

The remaining 60 languages covered by the fellowship phase of the title VI program are: Afrikaans, Albanian, Amharic, Armenian, Assamese, Azerbaijani, Berber, Bulgarian, Byelorussian, Cambodian, Czech, Danish, Dutch, Estonian, Ewe, Greek (modern), Gujerati, Hausa, Ibe, Icelandic, Ilocano, Javanese, Kanarese, Kashmiri, Kazak, Kazan-Turkic, Kpelle, Kurdish, Laotian, Lettish, Lithuanian, Madurese, Malagasy, Malayan, Mongo, Mosai, Mongolian, Nepali, Norwegian, Oriya, Panjabi, Pashtu, Quechua, Rajasthani, Romanian, Shone, Sindhi, Slovak, Slovene, Sundanese, Swedish, Tagalog, Tibetan, Tigrinya, Twi, Ukrainian, Uzbek, Vietnamese, Visayan, and Yoruba.

The language fellowship phase of title VI makes no provision for the study of French, German, Italian, or Spanish. However, these languages are taught at language institutes under another phase of the title VI program. The language institutes are designed to improve the abilities of elementary and secondary language teachers. Thirty-six such institutes will be established next summer.

Candidates for language fellowships should apply at any university offering advanced training in any one of the 85 "neglected" languages. Graduate schools of such universities have been asked by the Office of Education to set up special committees to review applications and to make recommendations to the Office.

The Office deadline for reception of such recommendations from the graduate schools is February 15, 1960. The Office of Education will select fellows after obtaining the advice of the special Title VI Advisory Committee made up of nongovernmental professional consultants.

Each fellowship will run for the summer of 1960, for the summer and the 1960–61 academic year, or for the 1960–61 academic year alone. The fellowships carry stipends up to $2,700, plus tuition, required fees, travel allowances, and allowances for dependents.

To qualify, the student must give "reasonable assurance" that, upon completing his training, he will be available to teach in college the language he has studied or be available for other public service requiring competency in the language. Persons training to be elementary or secondary school teachers of a modern foreign language are not eligible for these fellowships.

NDEA Field Representatives Named

U.S. Commissioner of Education Lawrence G. Derthick on November 25, 1959, named field representatives for the higher education programs of the National Defense Education Act to two additional regional offices of the U.S. Department of Health, Education, and Welfare. They are: Clarence E. Deakins, for Chicago, and Leonard G. Nystrom, for Dallas.

The new field representatives will work directly with colleges and universities participating in the four higher education programs of NDEA: Student Loans, Graduate Fellowships, Counseling and Guidance Training Institutes, and Language Development.

Mr. Deakins was formerly deputy director of the Illinois Commission of Higher Education in Chicago. He has been director of student services and dean of students at Illinois Institute of Technology in Chicago, and director of public relations and admissions at Missouri Valley College, Marshall, Mo. He received his M.S. degree at the University of Illinois.

Mr. Nystrom is on leave from his post at Southern Methodist University in Dallas, where he was director of admissions and scholarships. He has also served that institution as assistant registrar, registrar, and director of scholarships. He was a teacher and principal at Alamo Heights School District, San Antonio, Tex. He received his M.A. degree from Southern Methodist.

NDEA Language Institute in Germany

An advanced Summer Foreign Language Institute will be conducted by Stanford University in Germany from June 20 to August 19, 1960, with F. W. Strothmann, executive head of Stanford's Department of Modern European Languages, as director. It will be the first NDEA institute to be conducted outside the United States and the only one this year. Preference will be given to applicants who studied German at one of the 1959 NDEA summer institutes. Stanford's experience in this institute, which will have capacity for 86 secondary school teachers of German, will be used in determining whether to establish institutes in other countries in the summer of 1961.

Other Program Notes

Grants Awarded for Foreign Research

The Agricultural Research Service of the U.S. Department of Agriculture has announced that four grants for research abroad—two to Finland and two to Great Britain—have been made under the recent foreign research programs. The largest grant, of $253,000, went to the Biochemical Institute, Helsinki, Finland, for basic work on flavor transmission from dairy feed to milk. The other Finnish grant went to the Research Institute of Meat Technology at Hameenlinna for study of the influence of beneficial micro-organisms on flavor development in meat and their effects on the spoilage organisms.

One British grant went to the Shirley Institute of the British Cotton Industry Research Association in Manchester for basic study leading to improvement of flame-resistant treatments for cotton. The other went to the National Institute for Research in Dairying at Reading for study of micro-organisms responsible for flavor development in cheese and other cultured milk products.

Research abroad is being paid for with foreign currency accruing in various countries from the sale of surplus agricultural commodities under Public Law 480. The Forest Service, Agricultural Marketing Service, and Agricultural Research Service are the USDA agencies participating in this foreign research plan.

Educational Uses of Foreign Currencies

The 86th Congress made one significant addition to the program for the use of U.S.-owned foreign currencies earned from the sale of surplus farm products. The present program allows for support

of such international activities as the establishment of chairs in American studies and assistance to higher institutions sponsored by American citizens. In addition, U.S.-owned foreign currencies abroad may now be used for the preparation and distribution of audiovisual educational materials overseas.

Engineering and Scientific Manpower: Efforts to Improve Supply and Utilization

BECAUSE of their extensive implications for our educational system, the problems growing out of current and impending national engineering and scientific manpower needs are of great interest to the Office of Education.

This interest, shared by a large number of agencies and organizations both within and without the Federal Government, has led Henry H. Armsby, Chief for Engineering Education, to prepare a circular entitled *Engineering and Scientific Manpower* which will be the third in a series of similar publications by the Office. It describes, as did the 1954 and 1956 circulars, current engineering and scientific manpower programs in what are believed to be the most active national agencies involved in efforts to improve the supply and utilization of scientists and engineers. Whereas the 1956 publication listed 25 agencies and organizations, the new circular lists 30.

This circular, now in press, will be published as Office of Education Circular No. 483, Revised.

Training Programs for Employment Service Counselors

RECOGNITION of the increasing complexity of the employment service counselor's task has prompted the establishment, under the initial leadership of the Bureau of Employment Security in the Department of Labor, of improved hiring standards in selecting new counselors and a nationwide outservice training program at colleges and universities to improve the competence of counselors. Beginning counselors will enter service with more specific academic preparation than heretofore, and those already in the service are being given the opportunity for training in appropriate academic subjects to supplement the knowledge they acquire through inservice training and experience.

The program is the result of consultations between Bureau and State officials, following a national survey by the Bureau of the education and experience of counseling personnel in State employment services.

The outservice training program thus far embraces two basic types of activity: (1) A 4-to-5-week seminar or institute, often conducted during the summer when housing facilities are available on many campuses, and (2) regular university courses in counselor preparation, conducted during the academic year. Some States have adopted both types of training programs.

The institute type of training was inaugurated as a result of an experimental 5-week training course developed at the University of Iowa. Copies of the curriculum and suggestions for its use were transmitted to all State employment services, and during the summer of 1958 nine courses were set up in various parts of the country. This year 42 State agencies are participating in the program, and some 500 counselors from about 33 States are attending the institute courses, which range from 3 to 6 weeks, at 21 different universities. Another 500 counselors in 9 States are attending regular university courses. Thus a total of about 1,000 counselors have been or are enrolled in outservice training courses this year. Every effort has been made to have academic credit allowed for the courses completed by employment counselors, and, subsequent to the intitial institutes held the first year, credit has generally been given.

The training program is financed by special Federal grants to State employment services. The costs covered are tuition, books and supplies, travel, and maintenance. Salaries of trainees continue during the training period.

Because effective counseling plays an important role in the development of the individual and also contributes to meeting current manpower needs, the Department of Labor and its affiliated agencies will continue to emphasize this long-range staff-development program.

Physicians for a Growing America

Physicians for a Growing America, a report [1] by the Surgeon General's Consultant Group on Medical

[1] See "New Publications," p. 20, for complete bibliographical reference.

Education, headed by Frank Bane, deals with the problem of keeping the United States supplied with adequate numbers of well-qualified physicians for medical care, teaching, research, and other essential purposes. The Consultant Group, an arm of the Public Health Service, considers the maintenance of the present ratio of physicians to population a minimum essential. In order to maintain this ratio, the number of physicians graduated annually by schools of medicine and osteopathy must rise from 7,400 to 11,000 by 1975; in other words, the number of graduates must increase by 3,600.

Noting that in recent years there have been increasing difficulties in finding acceptable students for medical schools and that the proportion of failures and withdrawals has been growing, the authors recommend that opportunities for medical education be increased and equalized through expansion of the medical education plant and through substantial increases in funds to facilitate the financing of a medical education.

In 1958 medical schools spent an estimated $264 million for basic operations and grant-supported research, more than triple the amount spent a decade earlier. Financial support for medical schools has been growing markedly, the report states, especially in grant-supported research. However, more funds from varied sources will be needed if expenses are to be met.

Other topics covered by the study are the history; statistics; administration; financial, curricular, and physical operations; and faculty of medical schools.

The authors conclude that although planned expansion of present programs will provide an increase of 500 in the annual number of graduates by 1965, the remaining needed increase of 3,100 annually will require at least 3 other approaches: (1) Further expansion of enrollment in existing schools, (2) establishment of new programs of basic medical sciences, and (3) establishment of new 4-year schools. Planning will be necessary at the institutional, local, State, regional, and national levels.

University of Hawaii Enrolls Rockefeller Grant Students

M. M. ROSENBERG, dean and director of the College of Agriculture, University of Hawaii, has announced that 13 graduate and undergraduate agricultural students from countries in free Asia and the general Pacific area are now enrolled at the University of Hawaii under sponsorship of the Rockefeller Foundation, to study in fields related to tropical agriculture. They represent the first contingent under a grant of $110,000 to extend over a 5-year period.

AEC Offers Study Grants

THE Atomic Energy Commission has announced the availability of 70 fellowships in health-physics, the new science and profession devoted to the study, evaluation, and control of radiation hazards.

These fellowships are open to students who hold a bachelor's degree in biology, chemistry, engineering, or physics. They must also have adequate preparation in other related fields and must have completed mathematics through calculus.

The health-physics fellowships are awarded for an academic year of formal course work at one of the participating universities: Harvard, Vanderbilt, Kansas, Michigan, Rochester, and Washington. Fellows will follow up their course work with 3 summer months of training at one of the AEC cooperating installations: Argonne, Brookhaven, and Oak Ridge National Laboratories; Hanford Atomic Products Operation; Lawrence Radiation Laboratory; and the National Reactor Testing Station.

The stipend is $2,500 for 12 months, with additional dependency allowances. The deadline for filing applications is February 1, 1960.

Application forms and further information are available from the Fellowship Office, Oak Ridge Institute of Nuclear Studies, Post Office Box 117, Oak Ridge, Tenn.

NSF Science Information Grants Announced

THE National Science Foundation announced on December 7 grants totaling $286,900 for three projects to develop mechanized systems and advanced methods for increasing the availability of scientific information in the fields of chemistry and metallurgy.

Chemical Abstracts Service of the American Chemical Society at Columbus, Ohio, received grants totaling $127,700 for two projects, and the Center for Documentation and Communication Research,

School of Library Science, Western Reserve University, Cleveland, Ohio, a grant of $159,200, according to Alan T. Waterman, Foundation director.

"Scientific progress increasingly depends upon solution of the scientific information problem—how best to provide the scientist with the information he needs to do his work," Dr. Waterman said. "These grants represent fundamental attempts to provide long-range solutions as part of a Foundation effort to further the development of more comprehensive and versatile information tools for scientists."

With a grant of $69,800, Chemical Abstracts Service will investigate mechanical aids to chemical documentation for a 1-year period. It will seek ways of exploiting more fully the chemical information it collects and organizes in carrying on its primary function of indexing and abstracting chemical literature. As part of its project, the Service will review processing techniques and equipment, preparatory to developing and testing applicable systems and methods.

One aspect of the project will involve ways to mechanize chemical data in order to correlate structures of chemical compounds with their properties and uses. The development of a system for correlating these data would permit the Service to answer, for example, a question regarding the number of chemical compounds containing a particular element that also have boiling points within specific ranges. This type of information search, which cannot now be done readily with *Chemical Abstracts*, would be of great use to industrial, governmental, and institutional research laboratories.

With a second grant of $57,900 for 1 year, Chemical Abstracts Service will conduct research in the semantic content of chemical literature. As part of its program to mechanize, wherever possible, the processing and searching of information in chemistry, the Service will attempt to determine methods for reducing the variety of word forms needed to express concepts in a subdiscipline such as biochemistry. It will prepare concept dictionaries and apply the terms experimentally to the processing of abstracts, conduct experimental searches using machine techniques, and investigate machine programing needed to convert stored information automatically back to an intelligible form.

The Western Reserve University grant will help support a large-scale test program of evaluating procedures developed for the automatic processing and searching of literature of interest to metallurgists. The center will use the funds in working with not only the metallurgical literature proper but also the material of interest to metallurgists in such fields as physics, chemistry, and engineering. The program will ultimately include test searches and related studies designed to evaluate the results achieved with the mechanized procedures. In addition, it will analyze use made of the mechanized searching service by metallurgists.

This project also has the support of the American Society for Metals, and a committee of the society will lend active and continuing assistance to the project staff members at Western Reserve in developing details of the test program. In addition, the National Academy of Sciences-National Research Council has agreed to appoint an ad hoc committee of information specialists and metallurgists to participate actively in the further planning of the test program, to advise on questions that may arise throughout the program, and to assume responsibility for evaluating the results, including the planning of studies needed for proper evaluation.

Report on Federal Educational Activities Planned

IN RESPONSE to a request made by the chairman of the House Committee on Education and Labor on behalf of the committee, a comprehensive report on Federal educational policies, programs, and proposals is being prepared in the Legislative Reference Service of the Library of Congress. It will be similar to the report issued as House Document 423 in 1952, and will be expected to present up-to-date information on 300 or more Federal programs and activities, many of which are in the field of higher education. Programs will be described, and summarized information will be presented under subtitles including: Purpose, History and Description, Legal Authorization, Method of Administration, Levels of Education Concerned, Geographical Areas Affected, Number and Types of Persons Affected, and Fiscal Obligations. Comprehensive information is being gathered and analyzed by Charles A. Quattlebaum, specialist in education on the staff of the Legislative Reference Service. Probable date of completion of the study is at present unknown.

College facilities, continued from page 5

tered by the Housing and Home Finance Agency.

Indirect Federal aid for development of the college plant is available through tax laws which provide incentives to individuals and corporations to make gifts to colleges and universities. Numerous bills before the Congress have as their aim the increasing and broadening of these incentives through provision for tax deductions or tax credits.

No comprehensive policy on Federal aid for college plant development has been advanced and adopted by the Congress and approved by the President. There are grounds, however, for expecting the 2d session of the 86th Congress, just now getting under way, to seriously consider the development of a national policy.

Both the administration and the Democratic majority in Congress have endorsed the principle of Federal aid for the construction of academic and residential buildings on college campuses. During its 1st session, the 86th Congress enacted as one title of the Housing Act of 1959 a provision for direct Federal loans at low-interest rate for the construction of academic facilities. In vetoing two versions of this bill, President Eisenhower expressed his disapproval of this method of Federal participation in college physical plant development. At the same time, he suggested that the Congress consider the enactment of S. 1017 or H.R. 4267, identical administration-sponsored bills, which would aid institutions of higher education in plant development.

S. 1017 and H.R. 4267 would authorize the Federal Government to guarantee long-term private loans for the construction of residential and instructional facilities. Over a 20-year period, the Government would further assist colleges with the debt service by paying one-fourth of the principal of the loan.

A subcommittee of the House Committee on Education and Labor is expected to begin hearings on these proposals during January 1960. Thanks to the cooperation of most of our colleges in supplying inventory data and projections of their building plans, the Office of Education will be able to put before the subcommittee pertinent information on the kinds and conditions of existing plants. It will also be able to present a preliminary estimate of total college building needs and prospects of financing them, based on the judgments of college officials.

NEW PUBLICATIONS

Government Publications

How To Obtain

(*1*) *Cost Publications: Send request, enclosing remittance (check or money order), to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.*

(*2*) *Free Publications: Request direct from the agency issuing them.*

From the Office of Education

Education Directory 1959–1960, Part 1, Federal Government and States, by Louise Ratliff Murphy. Washington, U.S. Government Printing Office, 1959. Paper, 77 p. 30 cents. (OE–20004.)

Education Directory 1959–1960, Part 2, Counties and Cities, by Lester B. Herlihy. Washington, U.S. Government Printing Office, 1959. Paper, 104 p. 45 cents. (OE–20005.)

Education in the Soviet Zone of Germany, by Paul S. Bodenman. Washington, U.S. Government Printing Office, 1959. Paper, 162 p. $1. (Bulletin 1959 No. 26.)

Report on educational developments in the Soviet zone of Germany, including chapters on higher education and teacher education and the teaching profession. Lists institutions of university rank and their specialties and discusses the organization and control of higher education, admission policies, and the curriculum. Explains the general development of teacher education and the Teacher Training Order of 1953, as well as vocational, technical, and inservice teacher training.

Opening (Fall) Enrollment in Higher Education, 1959: Institutional Data, by Hazel C. Poole *and* Leah W. Ramsey. Washington, U.S. Government Printing Office, 1959. Paper, 34 p. 30 cents. (Circular No. 606.)

Organized Occupational Curriculums: Enrollments and Graduates, 1957, by Henry H. Armsby *and* Others. Washington, U.S. Government Printing Office, 1959. Paper, 201 p. $1.25.

This is the second annual analysis of enrollments and graduations in higher educational programs, of from 1 to 3 years in length, which lead to an associate degree or similar award, and which are sometimes referred to as terminal-occupational programs. Because different groups are interested in engineering-related enrollments and graduations as distinct from those classified as

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nonengineering-related, the data are reported separately in each of these two categories. The report lists enrollments and graduations for 3,635 technician and semiprofessional-level curriculums and summarizes craftsman-clerical data. Guidance officials of high schools and colleges have indicated that this publication is particularly useful as an aid to finding out which institutions enroll students in a variety of specific post-high-school programs. The American Society for Engineering Education sponsors the engineering-related part of the survey jointly with the Office of Education.

Statistics of Higher Education 1955–56: Receipts, Expenditures, and Property. Chapter 4, Section II, of the Biennial Survey of Education in the United States—1954–56. Washington, U.S. Government Printing Office, 1959. Paper, 177 p. 65 cents.

Other Government Agencies

Methodology of Statistics on Research and Development. Washington, U.S. Government Printing Office, 1959. Paper, 132 p. $1.25. (National Science Foundation publication, NSF 59–36.)

Proceedings of special session on research and development statistics conducted during the December 1958 annual meeting of the American Statistical Association, including four papers presented there and the resulting discussions. Examines statistical methods and problems encountered in the analysis of research and development manpower and costs.

Physicians for a Growing America, report of the Surgeon General's Consultant Group on Medical Education. Washington, U.S. Government Printing Office, 1959. Paper, 95 p. 60 cents. (Public Health Service Publication No. 709.)

Research and Development Contracts with Educational Institutions—Audit Instructions Pertaining to Revised Cost Principles. Washington, U.S. Departments of the Army, the Navy, and the Air Force, 1959. Processed, 20 p. (Joint Letter No. 41.)

Studies in Comparative Education—Bibliography: 1958 Publications. Washington, U.S. Government Printing Office, 1959. Paper, 111 p. (OE–14004.)

Annotated bibliography of general publications and of those relating to specific areas and countries in the following regions: Africa south of the Sahara, Eastern Europe, Far East, Near East and North Africa, Western Europe, Western Hemisphere.

Non-Government Publications

Obtain direct from the publisher. Prices are indicated when known.

American Universities and Federal Research, by Charles V. Kidd. Cambridge, Mass., Harvard University Press, 1959. 272 p. $6.

Examines the influence of Federal research funds on university policy and the new organizations institutions have created to handle Federal research problems. Considers such questions as the effects of Federal funds on the quality and type of research done, the balance between teaching and research, scientific freedom, the quality of undergraduate and graduate teaching, financing, and university administration and operation.

Higher Education in the Tidewater Area of Virginia: Survey and Report, report of a survey for the State Council of Higher Education of Virginia and the Norfolk Junior Chamber of Commerce, by S. V. Martorana, Survey Director, Ernest V. Hollis, Chief Consultant, *and* others of the Office of Education. Norfolk, Va., and Washington, D.C., 1959. Paper, 211 p. (Limited number of copies free from the State Council of Higher Education of Virginia, the Norfolk Junior Chamber of Commerce, and the U.S. Office of Education.)

Higher Education in the Tidewater Area of Virginia: A Condensation of the Complete Report. Paper, 65 p. (See above listing for any additional information.)

Institutional Research Concerning Land-Grant Institutions and State Universities, by W. Hugh Stickler. Tallahassee, Office of Institutional Research and Service, Florida State University, 1959. Paper, 142 p.

Report prepared for the Joint Office of Institutional Research of the American Association of Land-Grant Colleges and State Universities, conducted under a grant from the Fund for the Advancement of Education. It covers the extent and character of institutional research in or concerning the member institutions of the two organizations named, and reports on the present status of eight specific research studies in which the Joint Study Committee (AALGCSU–SUA) is interested. The appendixes, which comprise the bulk of the report (p. 23–142), list selected publications reporting or dealing with institutional research, under various categories.

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